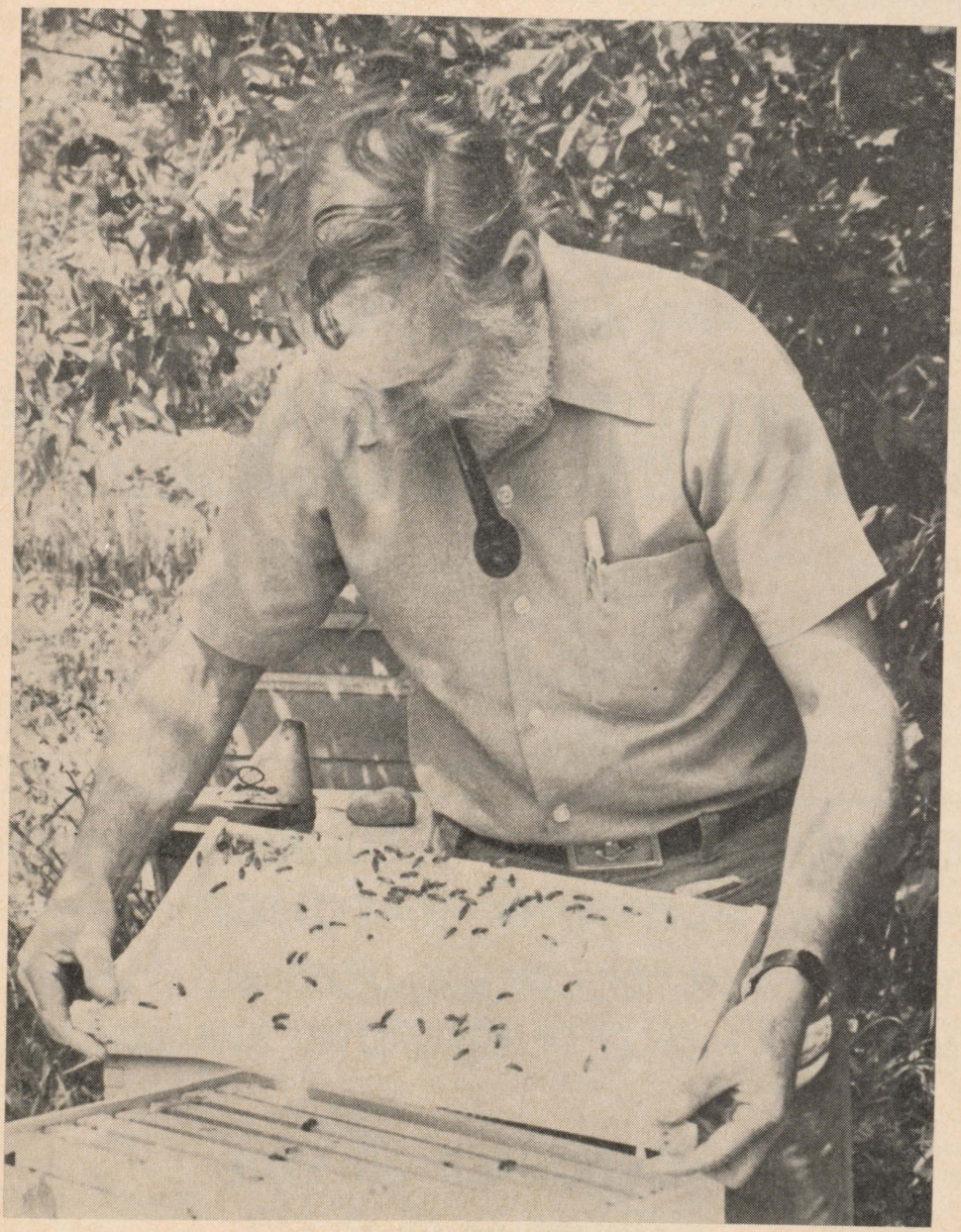
THE macdonald JOURNAL

JULY 1976



SPECIAL: EVENING COURSE PROGRAM '76-77

CANADIAN NATIONAL — QUEBEC PROVINCIAL
PLOWING MATCHES

FARM MACHINERY DEMONSTRATIONS and MACDONALD COLLEGE FALL ROYAL
with tours of THE FACULTY OF AGRICULTURE RESEARCH ACTIVITIES

at

MACDONALD COLLEGE
SEPTEMBER 23, 24, 25, 1976

THE macdonald JOURNAL

JULY 1976

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In This Issue

Cover: Professor V. R. Vickery checking a frame in one of his hives. See article page 3.

JOURNAL JOTTINGS

The hours may sometimes be long, some of the chores routine, but never can one even remotely say that putting a magazine together is dull.

I like to think that every issue is special; let's just say that this one is a little more so, not just for the material it contains but because of the varied "behind the scenes" tasks that occurred. And it isn't over yet — there's still the proofing, the layout — making the copy fit, selecting the photos — checking the pages, and finally putting the issue to bed. Those tasks, however, are still to come. It's of the ones past on which I'd like to elucidate.

Months ago it was decided that the Evening Course Program for '76-77 would be inserted in the July issue. That set the wheels in motion. We wanted to include material that would be of interest not only to our regular readers but also to those on the extensive Evening Course mailing list. Interviews were arranged and held, some copy rearranged, new deadlines set. Thanks to the fact that my colleagues were all hard at work, I was able to slack off and attend the QWI Annual Convention, which I always find a delightful change of routine. From the cooing of the pigeons just after dawn till the last coffee cup had been washed late in the evening there were photos to be taken for this and future issues, interviews to be taped, people to chat with, to listen to, and to learn from. If I left the Convention with renewed enthusiasm for publicizing QWI endeavours, then I feel each member must have gone home armed with enough ideas and objectives to keep her and her branch mentally alert and physically occupied for months to come.

Put the camera away, I thought, and get back to the routine gathering in and editing of copy.

A few pages done and we were off, camera ready, looking for two people in a "weed plot" somewhere. Our hour-long search proved futile, but the next morning we got the photo we wanted. The next photo session I really tried to get out of; Professor Vickery's lead article on beekeeping lends itself beautifully to a cover shot but someone else was going to be brave and take it, or so I thought! We couldn't find the photographer so, minus proper clothing and with a lot of false courage, I wandered in among the hives and shot film faster than I ever have before to try and get a suitable cover. I must admit that Professor Vickery's calmness and the ease with which he works with the bees was comforting but so was getting back to the old routine. A little bit of dullness is what I need in order to get the issue out but, hopefully, it won't last long.

Hazel M. Clarke

Guest Editorial

Planning for the "new" building for the Faculty of Agriculture and for renovating the older buildings has resulted in the staff looking down the road to the future.

With a more stabilized picture in mind, various groups have considered the benefits of closer administrative and academic unions. The three Departments of Agronomy, Horticulture, and Plant Pathology have merged to become a Department of Plant Science with the new Chairman, Dr. H. A. Steppler. Each of these disciplines will continue to be offered at both the undergraduate and graduate level with some changes in programs and titles. The increasing importance of plants for food means that a united attack for training and research is necessary now and will assume increasing importance in the future. The new Department will play a key role.

The Departments of Agricultural Chemistry and Agricultural Physics have combined to form a single department which will teach the chemical and physical sciences to students in the Faculty. The present research functions will continue. Recently the Department of Agricultural Chemistry has been closely associated with the School of Food Science. While administratively they will now be separated, in the "new" building they will be in close proximity, along with the Departments of Animal Science and Agricultural Engineering. These groups, particularly in food processing and nutrition, need to be able to work closely together.

The long and honourable history of these Departments at Macdonald College will remain. However, the future beckons and we must answer the needs of our students and our community. I hope, and I am certain, that 10 years down the road we will say these marriages were successful.

A. C. Blackwood,
Dean of the Faculty of Agriculture and Vice-Principal of Macdonald College.

PART I

Beekeeping for profit and pleasure

(An interview with Professor V.R. Vickery, Curator of the Lyman Museum and a Professor in the Department of Entomology. Joan Habel and Hazel M. Clarke asked the questions for the Journal.)

Hazel: As well as teaching beekeeping to degree and diploma students, you've had a most amazing response to the course you give in the Extension Evening Course program. Why is beekeeping so popular?

Professor Vickery: I think people are just getting very sick of the rat race. I enjoy teaching the bee course. It's a relaxation for me and I am sure that's the way other people find it. Not necessarily taking the course but getting out with the bees. They're looking for a challenge, for something different, and with the bees they can find it. Many people think working with bees is a dangerous pastime. It isn't if you take the proper precautions and gain some confidence.

Hazel: Are there many large-scale beekeeping operations in Quebec?

Professor Vickery: One family in Victoriaville have 4,000 colonies — that's the largest by far. There are others with 300 to 400 colonies, and some of our new beekeepers are starting off fairly large. We had one that took the evening course a year ago last spring, who has about 150, and one of our diploma students, who graduated this year, has just started with 25.

Hazel: What is an ideal size in terms of making a living or even a profitable sideline?

Professor Vickery: A very limited number of people in Quebec could make a living solely with bees. The family with 4,000 colonies are doing well, but not many operators can handle that many colonies in Quebec and that's purely because of limitation of space. There shouldn't be more than 20 to 28 colonies in one place because you need three miles between yards so that you don't have competition between the bees in the two different yards. The best parts of the province as far as beekeeping is concerned are the southeast/southwest sections, particularly southwest. From Granby west to the United States border and the Ontario border. There's very limited beekeeping in the Laurentians, for example. It's a little too cold there. The area we have to work with is not nearly as great as one might think, although there are a lot of bees down the St. Lawrence River valley, beyond Quebec City, and down to New Brunswick. It's mainly climate that dictates and also it's plants and plant succession. People ask me, "I have a three-acre field and it's all going to be in clover. How many colonies of bees can I put there?" My answer: "Your colony of bees will range over about ten square miles, nine at least. Your three-acre field doesn't add up to very much over that area. It's the plants that are blooming in that total area that count." How long is one species going to bloom? Not very long. "I want to keep bees because I have an orchard." I say, "fine, if you want to pollinate the orchard, why don't you rent some bees for bloom time." Apple trees are in bloom about 10 days and they are in bloom at the time that the colonies are building up, not when they are at peak strength. You can't get any surplus honey at that time.

It's the actual sequence of plants that bloom from the beginning of the season on through to frost in the fall that is required. If we don't have this sequence, or there's a big gap in plant bloom, it's pretty hard on the bees and they tend to use up all the stores they have — honey and pollen — and they get rather discontented. They may swarm. In a few rare cases, the bees have absconded. They've just up and left, trying to find an area with some plants in bloom. This is very common with the African bees but much less common with the Italians we use here.

Hazel: Is it expensive to get established?

Professor Vickery: You could say it is. If you start with one colony, the cost of equipment and bees is about $130-$140. If you start with five colonies, then the cost is usually reduced. Dealers might come down to about $110 to $115 per colony. In the first year you can't expect a surplus of more than 60 pounds. Often people say I got 125 pounds. I say, fine, you got a good crop and you did things right and your location was top-notch, but you can't count on that. If you sell 60 pounds at 80 cents a pound, you get back $48. That is not half of your investment. The second year, you should easily

Queen bee lays her eggs, surrounded by worker bees — she's the large bee down near the lower left.

bring in 100 to 120 pounds of honey. Deduct your costs and if you sell the honey you should clear about $100. There's $148 against the $130 that you started with, and you've made a profit. Now in how many agricultural enterprises can you get your money back and make a profit in the second year?

Joan: What about the cost of harvesting equipment for the man who has a few colonies?

Professor Vickery: The cheapest extractor you can get (the extractor and the knife are about the only pieces of equipment you can't improvise) costs about $74 this year. That is a two-frame, non-reversible, hand-operated extractor. If you go to a four-frame reversible with a power drive that's in excess of $200. There is one operator in the Pointe Claire area who says he will be prepared this fall to do custom extracting. This means that he takes part of your crop for doing the job, but, on the other hand, you don't have to lay out the money for an extractor. With only a few colonies it is probably better to use the custom extractor's service.

Hazel: Could you suggest briefly a few steps to successful beekeeping?

Professor Vickery: First you need good equipment and that doesn't necessarily mean starting with brand new equipment. You can buy equipment from an established beekeeper providing it has been inspected and you can get permission from the bee inspector to move it. This is a more convenient way to start than starting with new material in many ways.

Next, a good strain of Italian bees. I specify Italians rather than Caucasians for beginners because the Italians, while they are not as easy to handle as Caucasians, make far less propolis, which is the gummy substance that the bees use to cement up cracks and stick everything together. It's difficult to get frames out once they've stuck them up. You can, if you wish, after two years of experience, use hybrid queens. These are available from queen breeders in the southern United States, and some are very good. This will increase production a bit.

The location is probably the most important of all. You can divide location into segments — the actual physical location where you site the bees must have good air, water drainage, wind protection, and a southeast exposure which is far better than any other. It's a strange fact that two colonies set side by side in a location, one facing southeast, and the other facing northwest, won't operate the same way. The ones facing southeast will start work about an hour earlier than the others and work just as late in the afternoon. Wind protection is fairly important because bees can't fly very fast. They travel about 15 miles per hour and if there is a 15 mile an hour wind, it makes it very difficult for them to make any headway.

Size of property is not important at all — three acres or a house lot size doesn't really matter because the bees will range out well beyond that. Then there is the overall area that your bees will visit, the plants that are blooming in that area, and the sequence of plants blooming throughout the season. This, and colony strength, determine what your crop will be.

It is not too difficult to make arrangements with a farmer to put some colonies on his land, particularly if he has some crops that would benefit from pollination.

The next point is confidence. It's necessary for a beginning beekeeper to work with his bees enough to gain some confidence, to realize what he's doing and why he's doing it. You can read a great many things in books and the theory is fine, but you've really got to do it to see how it works out and you learn a great deal just from watching the bees and manipulating them. After that it is a matter of following the sequence of procedures correctly so that your colony builds up and is at peak strength at the same time as most flowers are in bloom — the clovers and alfalfa and many of our so-called weed plants will bloom from late June to the end of July, which is the peak period. If a colony hasn't built up its strength by that time, obviously it can't take advantage of the nectar that is available, at least it can't store a surplus from it. This is what can happen with package colonies. You come out at the end of July with a very strong colony but with very little honey stored because they have used what they gathered to build up their own population. With a wintered colony that comes to peak strength at the time this honey flow starts, you will find a population decline during the honey flow but the surplus of honey builds up. Make sure the colonies are in good condition and built up to strength at the right time. Also remember to add supers as they are needed, take them off and extract when they are full, get the crop off; these are simple procedures really, but they have to be followed correctly.

Wintering is a problem. If we can winter the colonies here in Quebec, it certainly is going to be an economic proposition because package colonies are costing nearly $30 for a three pound package. That is a far cry from the days when I started beekeeping and you could buy packaged bees

for $4.65 and that included the queen.

Many beekeepers say they would rather extract all the honey and get an extra 50 or 60 pounds of honey by extracting brood chamber combs. I don't think they save that much because a great deal of the honey that is in the brood chamber is actually a very thin layer of honey over pollen. If you extract that you get a great deal of pollen in the honey and you get a cloudy product. Some people have an allergenic reaction to honey with large amounts of pollen in it and I don't like it myself. I don't recommend this practice.

Hazel: Is there a good market for honey?

Professor Vickery: Quebec imports five million pounds of honey a year. We are that deficient. Ontario imports three million, so in the two provinces alone we have a market for eight million pounds. A great deal of that honey is brought in from Mexico and Argentina. It is of good quality, but the price is lower than most of our growers would accept.

We have a market here for some time to come and I don't think we will ever get to the point where we can supply our own demand in this province, in Ontario, the Atlantic provinces, and British Columbia. The three prairie provinces are the only ones that produce honey surplus to their own demands.

Joan: Is there any way we can build up, even in this climate, a way of producing our own bees?

Professor Vickery: We can do this. I have brought colonies through and split them before the end of April. Instead of splitting them, I could have shaken bees for packages for other people, but I can't supply a queen to go with them. The problem is that we cannot produce mated queens here early in the season. By mid-May we can produce queens and get them properly mated. We can produce queens earlier but we cannot get them mated properly. One of the steps being taken to overcome this at Guelph is artificial insemination of queens. A good technician can artificially inseminate 125 queens a day if he has a helper to provide him with the sperm from the selected drones. Dr. Townsend from Guelph and I have talked over this problem and the way it should be tackled. They have started to make preparations for their queen breeding program, selection for winter-hardy stock. They have got to select good queen stock first. They are also going to do a lot more wintering than they have done before. We are going to set up duplicate experiments here if we can get the money.

Another problem is bee diseases. Feeding bees in the fall enables us to feed them antibiotics so we can cut down the incidences of some of these bee diseases. If your own colonies have American foul brood they have to be destroyed, but if there is foul brood in the area and you want to protect your colonies, you can feed them sodium sulfthiazole in syrup. One thing that you do need to feed in the fall is the antibiotic, 'fumagillen'. It controls nosema disease, which is an endemic disease in all colonies in North America. It can be severe in the winter and early spring but if we feed in the fall and again in the spring with this antibiotic, we can pretty well cut this disease to the point where it is not important. This allows rapid spring build-up and almost insures a crop, which you might otherwise lose.

I would hate to see people getting into bees and then neglect them. This we can't tolerate because of the disease problem. If we have wild colonies that we can't control and, if they become infected with disease, they provide a source of disease for any other colony within at least a three-mile radius. If people start with bees and find that they are getting terrific reaction to stings and want to dispose of them they should give them to another beekeeper to look after. Don't just kill off the bees and let the equipment sit around.

Joan: How does the average beekeeper spot nosema?

Professor Vickery: He sees dead and crawling bees early in the spring. He may see some spotting in the hive or around the front of the hive in the spring. It doesn't always mean disease, but it can; if you see it inside, it does. If you suspect American foul brood, you call the bee inspector to have it verified. He will tell you what to do. If the colony has to be destroyed, he will supervise the destruction of the colony. There is a bit of compensation for that.

Joan: Where do people find the bee inspector?

Professor Vickery: The local agronome's office. With most of the other diseases that affect bees, the bees are able to look after themselves if you don't impose too much stress on them. If you can relieve the stress, keep your entrances small in spring so there is not much heat loss, don't give them too much space to heat, and make sure that they have got good stores that they can use — good supply of pollen — then they can do a lot because with most of the diseases of larvae, the bees can remove the dead larvae and carry them well away from the hive and dispose of them. They are good housekeepers.

Hazel: Would this affect the honey?

Professor Vickery: None of these bee diseases will affect humans.

Joan: Would it affect the flavour?

Professor Vickery: No, it won't affect flavour either.

Hazel: It would affect production.

Professor Vickery: Yes, it does affect production but American foul brood doesn't kill quickly — it may take nearly a year to kill out a colony and honey from the infected colony can be extracted and sold. This is bad because the honey, although it will not contain disease organisms affecting humans (because of the osmotic pressure and the glucose oxidaze which produces hydrogen peroxide and kills these organisms) may contain the spores of American foul brood. If bees find the honey container which contained spores of American foul brood they can take the disease back to the hive. Destruction of the colony is the only really safe way.

Joan: Would you say that beekeeping is a special kind of farming, unlike cows or pigs, etc. You just can't be someone who steps on and hates insects. A person must have some empathy for the insect.

Professor Vickery: Not necessarily. A person can gain empathy by keeping bees. I think that one thing people will have once they keep bees is respect for them. They may not be as high on the chain of animal types as man. cows, and pigs, but they have a lot going for them. They can do a great deal more instinctively than we can possibly do with a Ph.D., if you like. And, what's more, they have some ability to learn. They learn their landmarks. They navigate extremely well. Their system of navigation is far more perfect than the instruments that our early explorers used to discover and explore this country. Their fidelity to the plant species they are working on, for either nectar or pollen, is phenomenal. They don't vascillate as people do, as many other animals do. Busy as a bee. They are not always that busy, but if they are not busy they are looking for something to do. I have a lot more respect for bees than I do for most people. This is not misanthropy, but a high degree of appreciation of these little creatures.

Part II on "killer bees" and on the wintering of bees will be published in a later issue.

Macdonald Reports

Prof. Alan Watson and technician Lynne Muirhead check out a field of leafy spurge, one of the weeds under study for biological control.

by Joan Habel

BIOLOGICAL WEED CONTROL PROGRAM — YOU CAN HELP!

WANTED — fields of heavy infestations of the following weeds: St. John's wort (millepertuis perforé, en français); Canada thistle (chardon des champs); bull thistle (chardon vulgaire); nodding thistle (chardon penché); spotted knapweed (centaurée maculée); leafy spurge (euphorbe ésule), and tansy ragwort (séneçon jacobée)!

Professor Alan Watson, of the Agronomy Department, outlined his new research program in biological weed control at Macdonald College, which is the only major program in this work at the university level in Canada. It involves the cooperation of the farmers in Quebec who have real problems with the above weeds and would be willing and happy to work closely with the College to help bring about a biological control program.

Biological weed control is not a new concept — it has been a natural process since the living world began. There have always been insects, diseases and other pests which have attacked certain plant populations. Some weeds that are native to North America have always had their enemies to help control them. Many of our biggest weed problems began when weed seeds, mixed with crop seeds, arrived in the holds of ships, leaving their natural enemies behind. At planting time these seeds took hold, and with no forces against them, began to take over. Heavy cultivation practices and in more modern times, herbicides, were the only effective means of control.

Now researchers are investigating these weeds and their natural enemies in their native countries, and in some instances, are bringing the control pest into Canada under quarantine for testing at the Agriculture Canada research station in Regina. Once the pest's usefulness is determined, along with proof that it attacks only the desired weed and not an economic crop, it can be released for control measures in various parts of Canada. To date, a leaf-feeding beetle has controlled St. John's wort in the interior of British Columbia, reducing it to 2 per cent of its former density. In Nova Scotia and Prince Edward Island, tansy ragwort has been controlled by a defoliating caterpillar — since this weed is prevalent in the Gaspé, a similar control program could probably be effective there.

Alan Watson needs the help of the Quebec farmers. This summer Macdonald College will receive shipments of tested and safe insects to release on the seven weed populations mentioned in the first paragraph. Volunteers would offer their weed-infested fields for the release of control insects, with the understanding that they would not use herbicides or mowers on the fields. As the insects become established and begin to do their good work, field days could be organized so that other farmers would see the results and gather insects to take back to their own fields.

Researchers are studying another means of biological control — with plant diseases which attack only specific weeds and no other crop. In Australia, a rust has so effectively controlled skeleton weed that farmers have ceased to use herbicides on that plant. In Arkansas, a fungus disease of northern joint vetch (a real problem in rice fields there) has killed 99 per cent of this weed when used as a "biological herbicide" on young plants, with no damage to the rice. Dr. Watson would be happy to hear from farmers about any diseases which seem to be attacking their weed populations, so that he could investigate them for future research.

To offer weedy fields for research, or to discuss weed diseases, please call or write to Prof. Alan Watson at the Agronomy Department, Macdonald College, P.Q., H0A 1C0, (514) 457-6580, local 287. And in case you're worried that a control insect may decide to change his diet and gobble up your alfalfa, Dr. Watson offers the following reassuring fact, "Of the hundreds of organisms that have been tested and released as biological control agents in the world, NOT ONE has changed its host plant."

FROM STUDENT TO TEACHER

As we can see in this issue of the Journal, "Mac's" list of interesting Evening Courses seems to grow and grow. Not only are more and more people going back to the classroom to learn new subjects but we also see people returning to school to share their expertise with others by teaching courses as well.

Richard Saul is just such a person. He has designed the new Evening Course, "Establishing and Operating a Small Apple Orchard" for the person who already owns or wishes to start a good, small apple orchard. The course will be practical rather than academic, dealing with "how-to" and potential problems. Richard, who received a Diploma in Agriculture from Macdonal College in 1975, has just begun a five-year plan to build a new orchard — he has grafted, budded, and planted several thousand trees and bought and planted other nursery stock. We visited him in Frelighburg and Dunham, where he works as a technician at two apple orchards with a total of 8 000 trees. The sun was shining, all the trees on the hillsides were in blossom as far as the eye could see — small wonder he is excited about his job.

Richard Saul's previous background, for eight years in the family business, as a fruit and vegetable broker, along with a Diploma from the Executive Development Institute, well qualifies him to teach a second evening course, "Marketing Farm Products". In this course, the psychology of buyer-seller relationships will be discussed, with classroom simulation of marketplace situations.

Diane Lyse Benoit will graduate from Macdonald in December, 1976, with a Bachelor of Science, majoring in horticulture. As an urban dweller, Diane understands the special problems of living in a crowded city. Her course, Jardins et Parterres, will help people learn gardening on a small scale, the challenge of growing vegetables, flowers, and ornamentals in a tiny plot or on an apartment balcony. Diane's course is designed to help the potential gardener who knows little, who may buy a package of seeds and then say, "What now?"

A unique feature of Jardins et Parterres is that it will be taught in French. But Diane, who is fluently bilingual, emphasizes that someone who is English-speaking, with some conversational French ability, won't have any trouble keeping up. Classes will be very practical — slides, live plant material and demonstrations are planned. So apart from learning gardening, a student could also pick up a little more French!

Gardening, orcharding, or marketing, students in these new courses should gain a lot from these young "Mac" grads.

PLOWING MATCHES AT THE COLLEGE

On September 23, 24 and 25, 1976, Macdonald College will host both the Provincial and Canadian Plowing Matches. This will be a major event for the College, with thousands of visitors arriving from all across Canada, from rural Quebec, and from urban Montreal.

In the three years the College Farm has known that it would host the 1976 competitions, a lot of behind the scenes work has been done. The proposed site had to be accurately laid out and mapped, with allocation made for both the Canadian and Provincial plowing fields, display tents, machinery, and parking. Two years ago, the 55 acres of land to be used for the actual Plowing Matches were plowed, cleared of stones and levelled, then seeded to a crop of red clover and timothy. The surrounding areas had to be contoured to ensure that they would be mud-free in case of wet weather. Eight acres were reserved for machinery displays; grass was planted on 10 acres to make a firm sod for parking. During this summer, rainy-day work for many of the students employed at the farm will be preparing displays, poster and sign making.

The three days will have many different attractions to interest visitors. The plowing matches themselves draw many competitors of all ages and varying degrees of skill. There are entry classes for students, for farmers who have never been in a contest, for plowmen experienced in competition, and for those trying for Junior or Senior championships. Money and trophies are offered as prizes.

Another regular feature of the Plowing Match is the farm machinery display. The latest designs in farm equipment are exhibited with many companies demonstrating their machinery in field trials, so that farmers may have a chance to observe machines in use and ask questions. Booths will be sponsored by other branches of agribusiness and by rural groups such as Quebec Young Farmers, Quebec Farmers' Association and Quebec Women's Institutes. There is a special program for the ladies.

Visitors will also have a chance to get to know Macdonald College better. As the College Fall Royal will coincide with the Plowing Matches, many "open house" and "creative displays" designed by students and staff will be an added attraction for the public. These activities will be featured on the campus, in several of the College buildings.

Many busy people, from the Plowing Match committee to the Mac students, are working to make the Plowing Matches and the College Fall Royal an exciting, interesting, and educational event. We cordially invite you to visit us in September.

FOR YOUR VEGETABLE GARDEN

From the Horticulture Department, research on various mulches has given us some practical hints on improving the harvests in our gardens. Clear plastic mulch can double yields of sweet corn and canteloupe; tomato yields can be increased by 40 per cent with aluminum foil mulch, and cucumbers can produce up to 50 per cent more when mulched with black plastic.

More Milk Protein — A Goal for the 80s

by B. W. Kennedy
Director of Research
Dairy Herd Analysis Service
and
Assistant Professor
Department of Animal Science

Milk Consumption and Milk Composition

North American consumers are becoming increasingly conscious of their nutrition or lack of it. Just as the 1950s and 60s were the era of fast, high carbohydrate junk foods, the 70s and 80s may well be the era of quality nutrition.

Traditionally, milk has been regarded as a quality food, and indeed it is. It is a basic and often necessary component of most children's diets. However, whole milk consumption among adults has been declining in recent years. Part of this decline is because of concerns about the fat content of milk, and the decline in whole milk consumption is expected to continue. In contrast, low fat (2 per cent) milk consumption has increased and will continue to increase. In Canada, at present, the milk marketing systems provide finanical incentives to dairy farmers to produce higher levels of fat in milk, but changes in consumer demands are prompting the dairy industry to reexamine its marketing structures and to consider payment schemes that will place less emphasis on fat content and more emphasis on other milk constituents.

The other milk constituents, the non-fat solids, consist of protein, lactose (milk sugar) and ash (minerals). A typical glass of whole milk contains approximately 3.6% fat, 3.2% protein, 4.8% lactose, 0.5% ash and 88% water. The protein component is of special interest because milk protein is of an exceptionally high quality containing an excellent balance of essential amino acids, the building blocks for growth and development. The future task in dairy cattle improvement will likely be to alter the composition of milk such that the protein component, in particular, is increased relative to the fat content.

A number of factors influence the composition of a cow's milk. These include the herd environment, the genetic makeup of the cow, her age, stage of lactation, season of calving and to some extent her nutrition. Breed differences in milk composition are important, and Table 1 lists average milk composition values for Quebec Holsteins, Ayrshires, and Jerseys. On a percentage basis. Subsequent research showed levels of fat and protein, and, to a lesser extent, lactose. Percentages of fat, protein and lactose are lowest among Holsteins. It must be noted, though, that since Holsteins produce greater quantities of milk than the other breeds, total yields of milk solids per cow are greatest for Holsteins.

DHAS and Milk Composition

Since its inception in 1966, the Dairy Herd Analysis Service (DHAS) has been monitoring the milk composition of cows enrolled on the program. In fact, DHAS was the first milk recording program in North America to routinely test for milk constituents other than fat. This testing has been facilitated by the development and use of high speed electronic equipment for milk analysis.

During the first two years of the program, milk analysis was carried out with an Infra-Red-Milk-Analyzer (IRMA) which provided a measure of the fat, protein, and lactose content of each sample. The DHAS report to the dairyman gave percent fat and solids-not-fat on a herd average and individual cow basis, Jerseys produce the highest that the lactose component had limited economic importance and limited potential for genetic improvement. Consequently, the program was revised to measure and report fat and protein content only.

As the volume of herds and cows enrolled was expanded, more highly automated testing equipment, the Foss Integrated Milko-Tester and Pro-Milk Automatic, capable of analyzing a sample for fat and protein percent in less than 20 seconds, was obtained. Newer equipment, the Foss Milko-Scan, which can process a milk sample in only 12 seconds, will be in use shortly. The experience of DHAS with automated milk composition testing has demonstrated that component testing can be conducted on a mass scale at a reasonable cost.

Table 1: Milk composition among Quebec Holsteins, Ayrshires, and Jerseys

	Percent Composition					
Breed	Fat	Protein	Lactose	Ash	Total Solids	Solids-Not-Fat
Holstein.....	3.61	3.21	4.78	.55	12.15	8.54
Ayrshire.....	3.99	3.49	4.81	.52	12.81	8.82
Jersey.....	5.13	4.05	4.92	.51	14.61	9.48

Breeding for Milk Composition

After 10 years of milk component testing on an individual cow basis, a large volume of information on milk composition has been accumulated in the DHAS data files. These data have formed the basis for research into developing strategies for the improvement of the composition in milk, in general, and protein content, in particular.

Research has indicated that, under normal feeding conditions, the possibility of changing the percentages of milk components by changing feeding practices is relatively limited. Long term changes, however, are possible through selective breeding. In other words, over a period of time, it is possible to change the genetic character of our dairy cattle population to produce milk with a greater protein and solids-not-fat content.

The rate of genetic improvement for any trait depends upon the amount of variation exhibited by the trait, the heritability of the trait and the amount of selection practised. Table 2 lists estimated values for variability and heritability of milk yield and composition.

The variability, or standard deviation, simply stated, measures the range of differences between individual cows, and approximately two-thirds of the cows have production records within a standard deviation of the average. For example, two-thirds of the population have milk yields between 7,500 and 12,500 pounds. The remaining cows are above and below that range in equal proportions. Similarly, the fat tests of two-thirds of the cows fall within a range of 3.03 to 4.17 per cent. Heritability measures the portion of these differences due to heredity of genetics. The numeric value of heritability can range from zero to one. If the heritability is zero, heredity has no influence in the expression of the trait. If the heritability is one, the trait is completely determined by heredity.

Table 2. Variability and heritability of milk yield and composition

Trait	Average	Variability (Standard Deviation)	Heritability
Milk yield (lbs)	10,000	2500	.32
Fat %	3.6	.57	.58
Protein %	3.2	.43	.44
Solids-not-fat %	8.5	.54	.45

It is evident from Table 2 that milk fat is influenced to a great extent by heredity, and rapid genetic improvement can be made in this trait through genetic selection. Genetic gains in protein and solids-not-fat percent through selection, although expected to be less rapid than milk fat because of the smaller variability and heritability values, are of adequate magnitude to permit reasonable and economic genetic progress through selective breeding.

In practice, dairy cattle breeders seldom select for one trait alone, but practise simultaneous selection for several economically important traits. For example, under our current pricing structure, many dairymen select jointly for improved milk yield and fat percent. When selecting for more than one trait, the genetic correlation between the traits also influences the rate of genetic improvement. If the genetic correlation between two traits is positive, selection for one trait will improve the other. If the genetic correlation is negative, selection for one trait will diminish the other.

The genetic correlations between milk yield and the composition traits are, unfortunately, moderately negative, but genetic correlations between composition traits are strongly positive. Therefore, selection for milk yield alone, ignoring milk composition, results in a decline in milk composition. To maintain or increase levels of milk composition, it is necessary to exert enough selection pressure for milk composition to at least counterbalance the negative pull from selection for milk yield. The existing situation is illustrated in Figure 1 which depicts recent genetic trends in DHAS herds for milk, fat, and protein yield and fat and protein percent.
Genetic gains have been realized for yields of milk, fat, and protein. Percent fat has remained relatively constant, but protein percent has declined. Because of the existing price structure which provides a bonus for high fat milk, enough selection pressure has been exerted to maintain fat test levels, but since there is no economic incentive for protein content, protein percent has declined, and will continue to do so unless changes are made. Even though there is a high positive genetic correlation between fat percent and protein percent, it is not sufficiently large to prevent a depression in protein percent when fat test is maintained at stable levels.

From an animal breeding standpoint, it is feasible to reverse the decline in protein content with little sacrifice in milk yield. The genetic tools to do the job exist. What is lacking, is the marketing structure to provide the dairy breeder with sufficient incentive to get on with the job. At present, the breeder who selects for increased protein composition incurs a financial penalty, for to do so he must sacrifice some potential gains for fat test or milk yield, both of which are remunerated under our current pricing system.

(Continued on page 19)

MACDONALD COLLEGE EXTENSION COURSES 1976-77

MACDONALD COLLEGE:

Macdonald College is located at Ste. Anne de Bellevue, on the western tip of the Island of Montreal, about 20 miles from downtown Montreal.

Entrance to the campus may be made from the Lakeshore Road, and by the Trans-Canada Highway Exit 26 westbound via Ste. Marie Road and the overpass which leads to the farm, and eastbound Exit 26 and the service road. Also from Highway 2 & 20 at the Ste. Anne de Bellevue underpass.

REGISTRATION:

Registration by mail or in person is **now** open. The earlier you register the better the opportunity for you to attend the course of your choice, particularly if the class is limited. We will accept post-dated cheques, dated the first of the month the particular course opens.

To register by mail, completed application form (see inside back cover), together with cheque or money order made payable to Macdonald College, should be sent to Evening Courses, Extension Department, P.O. Box 237, Macdonald College, P.Q. H0A 1C0. For further information telephone: (514) 457-6580, local 226 or 227.

Day Registration: Extension Department, Room M014, basement of the Main Building, 9:00 a.m. to 12 noon and 1:30 to 4:30 p.m. Monday to Friday inclusive. We strongly advise early registration as a minimum of 10 students is required in order to present a course.

REFUNDS:

To obtain a refund, the student card of admission, as well as any material handed out in class, must reach the Extension Department before the second lecture in the course is given; this can be done by mail or in person. A refund, less $5.00 per course, will be mailed to the student within six weeks. No refund will be made to a student who registers after the second lecture in a course.

Allowances cannot be made for a change of personal plans including transfers or additional commitments which a student may accept after arranging his/her course schedule.

FEE:

The fee, as indicated for each course, is payable in advance at time of registration.

MACDONALD JOURNAL:

Each person registering for an evening course will receive a one-year free subscription to the Macdonald Journal, a monthly publication reflecting the endeavours of Macdonald College and serving the needs and interests of farmers and the rural community. If you are already receiving the Journal, may we suggest you pass your free copy on to a friend.

RECEIPTS:

For those who require receipts for income tax, forms in duplicate will be available at the last lecture of the course.

CHANGE OF ADDRESS:

Students should inform the Extension Department of any change of address after registration. The course in which the student is registered should be indicated.

CLASSROOMS:

Buildings and room numbers for all courses will be posted on the Extension Department Directory Board located in the foyer of the front entrance to the Main Building. The building and room number may also be obtained by telephoning the Extension Department, 457-6580, local 226 or 227.

CANCELLATION OF CLASSES:

If a class must be cancelled for any reason, notice to that effect will be made on Radio Station CJAD.

PARKING:

Ample parking space and no parking fee.

COURSES

FALL TERM

FARM PRACTICES

Coordinated by Rudi Dallenbach, Director, Macdonald College Farm. 4 sessions of 2 hours, Tuesdays at 6 p.m., September 7, 14, 21, and 28, 1976. Farm Centre, Macdonald College. Fee $30.

Topics covered will be: ploughing, discing, harrowing, fertilizing, and harvesting corn.

BEES AND BEEKEEPING

Prof. V. R. Vickery, Curator, Lyman Museum. 10 lectures of 2 hours, Mondays at 7 p.m., beginning September 13 through November 22, 1976. Biology Building, Room B204, Macdonald College. Fee $60. Class limited to 30. Thanksgiving Monday, College holiday.

Life and behaviour of honeybees. Insect pollination of plants. Practical beekeeping.

Textbook — "Complete Guide to Beekeeping" by R. A. Morse, 1972, Dutton & Co. Available at Macdonald College Bookstore, approx. $9.

Bee veil (or mosquito veil) available at Canadian Tire or Jones & Son, Bedford, P.Q., approx. cost $1.50 — $4.50.

IS FARMING FOR YOU?

Rudi Dallenbach, Director, Macdonald College Farm. 10 lectures of 2 hours, Tuesdays at 7 p.m., beginning October 5 through December 7, 1976. Farm Centre, Macdonald College. Fee $60, or $9 a lecture.

This course is designed to acquaint you with the many and varied aspects of country living and farming. The following topics will be discussed:

1. What to look for when buying a farm
2. Visit to Macdonald College farm
3. How to organize your farm
4. Livestock on the farm
5. Getting familiar with soils
6. Planning a forage program
7. Cash crop farming
8. Fruit and vegetable farming
9. Taxation for part-time farmers
10. Farm buildings and machinery management.

SMALL-SCALE SWINE PRODUCTION

Prof. T. G. Hartsock, Animal Science Department. 10 lectures of 2½ hours, Tuesdays at 7:30 p.m., beginning September 21 through November 23, 1976. Agriculture Building, Macdonald College. Fee $60.

This course is intended for persons with little or no experience with swine but who may be interested in rearing small numbers of swine as a side operation or on a hobby-type farm. The course will include a discussion of the various aspects of small-scale swine production as well as farm visits for demonstrations of routine management practices, buildings, equipment, baby pig care, and meat cutting.

FIELD CROP PRODUCTION

Prof. N. C. Lawson, Plant Science Department. 10 lectures of 2 hours, Thursdays at 8 p.m., beginning September 23 through November 25, 1976. Agriculture Building, Macdonald College. Fee $60.

A course for those who are about to buy or have just bought a farm. Topics covered will be the choice of crops, with emphasis on their comparative potential as sources of energy and protein for livestock feeding, as well as the basic considerations in field management of hay and pasture crops, cereals, corn, and seed proteins.

MANAGING THE SMALL POULTRY FLOCK

Prof, R. B. Buckland, Animal Science Department. 6 lectures of 2 hours, Wednesdays at 7 p.m., beginning September 22 through October 27, 1976. Poultry Building, Macdonald College. Fee $40.

The course content will be directed toward individuals who wish to raise a few birds as a hobby and/or as a source of egg and meat for the family. The course will include a discussion of sources of stocks, housing, feeding, incubation practices, and breeds. Depending on the interest of the participants, the above aspects of raising chickens, turkeys, ducks, geese, pheasants, quail, partridge, and pigeons will be discussed.

PRIVATE FORESTRY AND CONSERVATION

Coordinated by Prof. A.R.C. Jones and Prof. J. D. MacArthur, Renewable Resources Department. 10 lectures of 2 hours, Thursdays at 7:30 p.m., beginning October 7 through December 9, 1976. Biology Building, Macdonald College. Fee $60.

A practical course in conservation-oriented management for private forest owners with special attention to forest resources and values, management alternatives, and multiple-use possibilities. It will include: tree identification, forest ecology, growth of trees and stands, silvicultural practices, reforestation and plantation management, forest protection, principles of fish and game management, water conservation, Christmas tree culture, sugarbush management, aeshetic use of trees, marketing information, service organizations, and legal matters of concern to small forest owners and managers. Field trips to interesting operations will be arranged.

FARM MECHANIZATION, STRUCTURES, AND DRAINAGE

Coordinated by Profs. J. Ogilvie, R. Broughton and E. Norris, Agricultural Engineering Department. 6 lectures of 2 hours, Tuesdays at 7 p.m., beginning September 21 through October 26, 1976. Farm Machinery Building, Macdonald College Farm. Fee $40.

1. Land drainage and improvements
2. Land drainage and improvements
3. Farm equipment requirements
4. Maintenance of farm machinery
5. New construction and remodelling of farm buildings
6. Mechanization of feeding and waste disposal.

ESTABLISHING AND OPERATING A SMALL APPLE ORCHARD

Richard Saul. 7 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning September 21 through November 2, 1976. Agriculture Building, Macdonald College. Fee $45.

Designed for those who either are thinking of establishing an orchard on their farm or renovating an old one.

1. Selection of an orchard site
2. Selection of variety of apple, rootstock, where to obtain same, and approximate costs
3. When and how to graft, bud, and plant trees in the nursery and orchard
4. Fertilizing and spraying programs
5. Training and pruning methods, topworking of old trees
6. Hormone sprays and harvesting techniques
7. Storage and marketing of apples, includes "pick your own" method.

A HOBBY GREENHOUSE — WITH SUCCESS

Eric Brunet and Ede J. G. Gyapay. 4 lectures of 2 hours, Thursdays at 7:30 p.m., beginning September 23 through October 14, 1976. Agriculture Building, Macdonald College. Fee $30.

Construction: location, ventilation, glazing, floor and walks, equipment, heating and cooling systems.

Operation: Light, temperature, moisture, soil, fertilizers, plant disorders, insects and diseases, spraying, dusting and fumigation.

SELECTION AND CARE OF SHADE TREES

Prof. J. D. MacArthur, Curator, Morgan Arboretum. One classroom orientation of two hours plus a day devoted to field work looking at practical examples and demonstrations. Biology Building, Macdonald College. Fee $30.

Lecture: Monday 7:30 p.m., October 18, 1976
Field Day: Saturday 10 a.m.-4 p.m., October 23, 1976.

A condensed treatment of practical tree identification, characteristics of shade and ornamental trees, suitable species for specific situations and objectives, techniques of transplanting, routine care of trees with special attention to common problems.

JARDINS ET PARTERRES

Diane L. Benoit. 4 cours de 2 heures, lundi à 7 p.m., commençant le 4 octobre jusqu'au 1er novembre, 1976. Agriculture building, Macdonald College. Le coût $30. Maximum 20 étudiants. Jour de l'Action de Grâce, congé du Collège.

1. Légumes de saison froide
2. Légumes de saison chaude
3. Fleurs annuelles et de parterre
4. Rocailles et fleurs vivaces.

La préparation du soil, la date et l'entretien des semis, la transplantation et la fertilisation, les insectes et maladies à surveiller et la récolte. Les fleurs annuelles et vivaces et leurs temps de floraison, la planification des parterres et des rocailles, le choix des variétés et leurs exigences.

HORSE MANAGEMENT 1A

Pam Dillingham. 10 lectures of 2 hours, Tuesdays at 8 p.m., beginning September 28 through November 30, 1976. Agriculture Building, Macdonald College. Fee $60.

This course will be of general interest to both horse-lovers, owners, and potential owners. It will include discussion of: the history and development of the horse; the various breeds, training, development, nutrition, basic veterinary care, stable care, competition riding, and the economic potentials. Two practical stable sessions will be included.

SUGAR MAPLE AND MAPLE SYRUP

Coordinated by Prof. J. D. MacArthur, Curator, Morgan Arboretum. 6 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning October 12 through November 16, 1976. Biology Building, Macdonald College. Fee $40.

A course to present basic information on the sugar maple species and on production of maple syrup. It will include discussion of:

1. Silvics and silviculture of sugar and black maples
2. Development of productive sugar groves
3. The phenomenon of sap flow and methods of sap collection and handling
4. Processing maple sap to produce maple products
5. Special problems and possible solutions
6. Sources of information on the various aspects of the maple industry.

GARDENING FOR ALL SEASONS

Ede J. G. Gyapay, Plant Science Department. 5 lectures of 2 hours, Mondays at 7:30 p.m., beginning September 20 through October 25, 1976. Agriculture Building, Macdonald College. Fee $35. Thanksgiving Monday, College holiday.

The course will include discussion of: Fall preparation of compost; soil preparation, manuring, and fertilizing; pruning, cleaning, spraying; sowing, planting. Winter storage of bulbs, tubers, plants, and vegetables; protection of shrubs, fruit trees, and small fruits. Spring pruning, cleaning, and spraying shrubs and fruit trees; soil preparation, manuring, and fertilizing; seedlings to be prepared indoors for later planting in the garden.

MARKETING FARM PRODUCTS

Richard Saul. 7 lectures of 2 hours, Wednesdays at 7:30 p.m., beginning September 22 through November 3, 1976. Agriculture Building, Macdonald College. Fee $45. Class limited to 15.

In addition to formal lectures, marketing situations will be simulated in the classroom by marketing games and case studies, and students will be responsible for their analysis and subsequent solutions. Topics discussed will be:

1. How to "size up" a market condition and predict its rise or fall
2. How to anticipate and prepare for your customers' needs
3. How to know whether to "stand firm" on a price or be "flexible"
4. How to know when you are being taken advantage of as a supplier
5. Following the journey of a farm product from its origin to consumer.

APPLICATION OF RENEWABLE ENERGIES, SOLAR, WIND, BIOMASS

T. A. Lawand, Brace Research Institute. 10 lectures of 2 hours, Thursdays at 7 p.m., beginning September 16 through November 18, 1976. Macdonald College. Fee $60.

The course will discuss the role of renewable energies — solar, wind, and biomass — in meeting the needs of Canada and the world in the future. Lectures will review the application of these solar-based energies in developing countries as well as their potential in Canada. The course will focus on an assessment of the factors that householders should know if they wish to eventually use solar energy for the heating and cooling of their houses.

FLINT (Forest Living In Northern Terrain)

Coordinated by A. G. Racey, M. van Eyken, and R. R. Stilwell. 6 sessions of 2 hours, Mondays at 7:30 p. m., beginning September 20 through November 1, 1976. Agriculture Building. Macdonald College. Fee $40. Thanksgiving Monday, College holiday.

"Flint" stands for "Forest Living In Northern Terrain", which, for the purposes of this course, covers the Great Lakes — St. Lawrence and Boreal Forest Regions of Canada, as defined by the Canadian Forest Service of Environment Canada. The program has the following objectives:

1. To promote survival
2. To promote appreciation of the forest environment
3. To promote awareness of the uses and values of the forests of Canada
4. To promote the forest community
5. To develop a new security
6. To promote awareness of the value of leisure.

REAL ESTATE LAW

Allan A. Mass. 10 lectures of 2 hours, Mondays at 7:30 p.m., beginning September 13 through November 22, 1976. Agriculture Building, Macdonald College. Fee $60. Thanksgiving Monday, College holiday.

A practical course designed to explain basic elements of Quebec real estate law, of interest to both rural and urban property owners. Topics will include:

1. Purchase and sale
2. Leases, rent control, and condominiums
3. Mortgages
4. Servitudes, restrictive covenants and title defects
5. Civil liability and insurance
6. Zoning and environmental controls
7. Taxation

8. Real estate brokers.

Participants will be provided with examples of the various deeds discussed in the course.

WALL HANGINGS — MACRAME, NON-LOOM WEAVING, HOOKING

Vera Donefer. 10 sessions of 2 hours, Tuesdays at 7:30 p.m., beginning September 14 through November 16, 1976. Agriculture Building, Macdonald College. Fee $60. Class limited to 15.

Beginners course for exploration of non-loom weaving, macramé, hooking-wrapping, and fiber structures.

All techniques are taught for developing skills that are best for you; they teach the fundamentals, allow you to experiment, to improvise, to take off in any direction. They encourage creativity. An advantage of off-loom weaving is that anyone can produce a wall hanging with the minimal materials and little equipment. Materials extra.

DESIGN AND ADVANCED WALL HANGINGS

Vera Donefer. 10 sessions of 2 hours, Wednesdays at 7:30 p.m., beginning September 15 through November 17, 1976. Agriculture Building, Macdonald College. Fee $60. Class limited to 15.

A combination of design and more advanced wall hangings. For those who have had previous experience in Macramé, Non-Loom Weaving, or Hooking.

LET'S QUILT IT

Dorothy Rich. 8 sessions of 2 hours, Mondays at 7:30 p.m., beginning September 20 through November 15, 1976. Main Building, Room M324, Macdonald College. Fee $50. Class limited to 20. Thanksgiving Monday, College holiday.

The making of a quilt including instructions on colour, design, pattern-making, setting, quilting process and finishing processes. Materials extra.

ACCOUNTING FOR SMALLER BUSINESS

Richard P. Doyle. 10 lectures of 2 hours, Wednesdays at 8 p.m., beginning September 15 through November 17, 1976. Agriculture Building, Macdonald College. Fee $60.

The course is designed to introduce the owner of a small business and his/her staff to a basic knowledge of accounting and related matters. The following topics will be discussed:

1. Double-entry bookkeeping
2. Financial statements and how to read them
3. Budgetary control and how to use it
4. Concepts of internal control
5. Accounting systems for the smaller business.

MAKE IT FROM ODDS AND ENDS

K. Martin, Lecturer, School of Food Science. 3 sessions of 2 hours, Wednesdays at 8 p.m., September 15, 22 and 29, 1976. Main Building, Macdonald College. Fee $25.

A demonstration and workshop course in the making of gifts, decorations, jewellery, household articles, etc. Utilizing metal, plastic, burlap, and other materials found around the home.

Worth-while objects from odds and ends.

LIVING CANADIAN AUTHORS

Maureen D. Coleman. 10 lectures of 2 hours, Tuesdays at 8 p.m., beginning October 19 through December 21, 1976. Agriculture Building, Macdonald College. Fee $60.

The course will begin with an introductory background discussion on Canadian Literature, and a presentation of source materials. It will include a cross section of writers (both geographically and in time span), ranging from established authors such as Margaret Lawrence and Robertson Davies to the more contemporary Margaret Atwood and Alice Munroe. One class will be spent attending a drama by a Canadian playwright.

MONTREAL WALKS AND TALKS

Joy Schreiber. 6 sessions of 2 hours, Wednesdays at 6 p.m., beginning September 8 through October 13, 1976. Agriculture Building. Macdonald College. Fee $40.

Discover the history of Montreal by examining the early French, Victorian, Art Deco and contemporary buildings in the city.

1. "Old stones can talk" (slide lecture)
2. Old Montreal Walk No. 1
3. Victorian and contemporary Montreal
4. Canadian Art (slide lecture)
5. Old Montreal Walk No. 2
6. City Tour (by bus).

STAINED GLASS WORKSHOP

John Lehman. 10 sessions of 3 hours, Wednesdays at 7 p.m., beginning September 15 through November 17, 1976. Farm Centre, Macdonald College. Fee $60.

This course will deal with the technique of glass cutting with the aim of producing leaded glass art objects. Projects will be based on individual initiative and should include one candle chimney, one lamp, and one small window. Prerequisites are patience, perseverance, coordination, and interest. The price of the course includes an appropriate supply of materials for the objectives stated.

WINTER TERM

BEEF MANAGEMENT

Coordinated by Lynn Forgrave, Diploma in Agriculture Program. 10 lectures of 2 hours, Mondays at 7:30 p.m., beginning January 17 through March 21, 1977. Farm Centre, Macdonald College. Fee $60.

The course is intended to introduce the participant to management techniques currently used in beef production. The direction of the course is toward the small operation used as a hobby farm or as the first step into commercial beef production. Special emphasis will be given to breeding, feeding, and housing systems of both cow-calf and feedlot operations. Class participation is encouraged and hopefully real-life problems will originate from the audience for discussion.

TAXATION FOR PART-TIME FARMERS

Eric Purdie. 3 lectures of 2 hours, Thursdays at 8 p.m., January 20, 27, and February 3, 1977. Farm Centre, Macdonald College. Fee $25.

CONTROLLING CROP DISEASES, INSECTS, AND WEEDS

Coordinated by Profs. R. H. Estey, R. K. Stewart and A. K. Watson, Plant Science and Entomology Departments. 10 lectures of 2 hours, Tuesdays at 8 p.m., beginning January 11 through March 15, 1977. Biology Building, Macdonald College. Fee $60.

A course for those who have recently acquired farmland. It will cover the practical aspects of field crop disease, insect, and weed control including discussions of the identification, prevention, and control of common plant diseases, weeds, and insect pests.

GROW YOUR OWN TREES, SHRUBS, AND FLOWERS

H. A. Kouwenberg and R. J. Watson: 10 sessions of 2 hours, Tuesdays at 7 p.m., beginning January 11 through March 15, 1977. Biology Building, Macdonald College. Fee $60.

A practical course to introduce the amateur to the principles of plant propagation and the establishment of trees, shrubs, and flowers. The course includes the basic techniques of propagation, nursery and greenhouse management, the establishment of seeds, seedlings, and cuttings to regenerate plants. Planning for planting, equipment, layout, selection of species, and techniques of pruning, care, and maintenance.

IS FARMING FOR YOU?

Rudi Dallenbach, Director, Macdonald College Farm. 10 lectures of 2 hours, Tuesdays at 7 p.m., beginning January 25 through March 29, 1977. Farm Centre, Macdonald College. Fee $60, or $9 a lecture.

This course is a **repeat** of the Fall Term.

SELECTION AND CARE OF BREEDING STOCK

Coordinated by Rudi Dallenbach, Director, Macdonald College Farm. 10 sessions of 2 hours, Thursdays at 7 p.m., beginning January 27 through March 31, 1977. Farm Centre, Macdonald College. Fee $60, or $9 a session.

A practical course, featuring sheep, swine, beef, dairy, and poultry, demonstrating how farm animals are evaluated and handled.

330-410B COMPARATIVE AGRICULTURE
(Value 3 credits)

Coordinated by Prof. B. P. Warkentin, Staff, and guest lecturers. Faculty of Agriculture, Macdonald College. 12 lectures of 3 hours, beginning week of January 10, 1977. Date and time to be announced. Fee $70.

Study of contrasts in physical, biological, and social resource bases for agriculture between temperate and tropical regions; organization of agricultural production in developing countries; agriculture in the development process; technology transfer and aid programs for agriculture. Case studies will be used.

This course also available for non-credit.

WATER FOR FARM, HOME, AND COTTAGE

Coordinated by Prof. R. S. Broughton, Agricultural Engineering Department. 6 lectures of 2 hours, Wednesdays at 7:30 p.m., beginning January 19 through February 23, 1977. Farm Machinery Building, Macdonald College Farm. Fee $40.

Quality and quantity of water needed for home, cottage, and farm; water pumps and pressure distribution systems; treatment to reduce water hardness, and remove contaminants; location and construction of wells and ponds; construction and maintenance of septic tanks and disposal fields, and other means of waste water disposal.

FARM WELDING

Coordinated by Prof. E. R. Norris and Jean-Pierre Laplaine. 10 sessions of 2 hours, Mondays at 7:30 p.m., beginning January 10 through March 14, 1977. Farm Machinery Building, Macdonald College Farm. Fee $60. Class limited to 20.

The course is designed for the novice welder who wants to develop sufficient skill in oxyacetylene and electric arc welding to make minor repairs and small fabrications around the farm. Topics to be covered are: Identification of metals; physical properties of metals; equipment for welding; identification, specifications, and selection of welding rods; techniques of arc and flame welding; brazing and silver soldering; use of the cutting torch; safety in welding.

60% of total class time will be devoted to welding practice. A charge of $25 will be made to offset the cost of materials consumed.

HORSE MANAGEMENT 1B

Pam Dillingham. 10 lectures of 2 hours, Tuesdays at 8 p.m., beginning February 8 through April 12, 1977. Agriculture Building, Macdonald College. Fee $60.

This course is a **repeat** of the Fall Term.

ORGANIC GARDENING

Prof. S. B. Hill, Entomology Department. 10 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning January 25 through March 29, 1977. Biology Building, Macdonald College. Fee $60.

If you already garden or farm organically, come along and share your knowledge; if you want to learn how, now's your chance. We will cover the topics listed below and any others which you are anxious to discuss. Films, demonstrations, and other learning aids will be used. Bring along your personal garden problems — there has to be a solution!

1. Why grow food organically — some background considerations
2. Planning the garden to meet your needs and avoid problems
3. The soil and its inhabitants
4. Soil preparation and fertilizing
5. Composting
6. Seeds and seeding; plants and planting
7. Mulching and weed control
8. Disease and pest control without using synthetic poisons
9. Special needs of particular plants and how to satisfy them
10. Harvesting, storage, and pre-winter chores.

MONTREAL BIRDS

Coordinated by Bob Carswell and Peter Mitchell, members of the Province of Quebec Society for the Protection of Birds. 10 sessions of 2 hours, Tuesdays at 6 p.m., beginning March 15 through May 17, 1977. Agriculture Building, Macdonald College. Fee $60. Class limited to 25.

Discussions and field trips devoted to identifying spring birds by sight and by sound (and outings to test your skill in this area); seminars on where to look for the various species in the Montreal area, and how best to attract and feed birds and manage your property for this purpose; discussions on migration (including anticipated spring arrival dates), nesting, territoriality, endangered species, conservation and other topics.

Binoculars needed for field trips (7 x 35 excellent). A good field guide (either Peterson, "A Field Guide to the Birds" or Robbins, Brunn & Zim, "Birds of North America").

APPLICATION OF RENEWABLE ENERGIES, SOLAR, WIND, BIOMASS

T. A. Lawand, Brace Research Institute. 10 lectures of 2 hours, Thursdays at 7 p.m., beginning January 20 through March 24, 1977. Macdonald College. Fee $60.

This course is a **repeat** of the Fall Term.

LET'S QUILT IT

Dorothy Rich. 8 sessions of 2 hours, Mondays at 7:30 p.m., beginning January 17 through March 7, 1977. Main Building, Room M324, Macdonald College. Fee $50. Class limited to 20.

This course is a **repeat** of the Fall Term.

LIVING CANADIAN AUTHORS

Maureen D. Coleman. 10 lectures of 2 hours, Tuesdays at 8 p.m., beginning January 25 through March 29, 1977. Agriculture Building, Macdonald College. Fee $60.

This course is a **repeat** of the Fall Term.

WALL HANGINGS — MACRAME, NON-LOOM WEAVING, HOOKING

Vera Donefer. 10 sessions of 2 hours, Tuesdays at 7:30 p.m., beginning January 18 through March 22, 1977. Agriculture Building, Macdonald College. Fee $60. Class limited to 15.

This course is a **repeat** of the Fall Term.

STAINED GLASS WORKSHOP

John Lehman. 10 sessions of 3 hours, Wednesdays at 7 p.m., beginning January 19 through March 23, 1977. Farm Centre, Macdonald College. Fee $60.

This course is a **repeat** of the Fall Term

ACCOUNTING FOR SMALLER BUSINESS

Richard P. Doyle. 10 lectures of 2 hours, Wednesdays at 8 p.m., beginning January 12 through March 16, 1977. Agriculture Building, Macdonald College. Fee $60.

This course is a **repeat** of the Fall Term.

OUTDOORS '78

Prof. A.R.C. Jones, Renewable Resources Department. (Offered in alternate years, to be given in 1977-78.)

SPRING TERM

A HOME VEGETABLE GARDEN

Ede J. G. Gyapay, Plant Science Department. 6 lectures of 2 hours, Mondays at 7:30 p.m., beginning April 4 through May 16, 1977. Agriculture Building, Macdonald College. Fee $40. Easter Monday, College holiday.

1. Planning the garden
2. Soil preparation
3. Seeds, seeding, plants, planting
4. Weed and pest control
5. Particular needs and habits of vegetable crops
6. Medicinal and potherbs.

QUEBEC SPRING WILDFLOWERS

Prof. Dennis W. Woodland, Plant Science Department. Length of course 5 weeks, 10 lectures of 2½ hours, Tuesdays and Thursdays at 7 p.m., beginning May 3 through June 2, 1977. Biology Building, Room B212, Macdonald College. Fee $60. Class limited to 25.

A field and laboratory course designed for the serious gardener, amateur botanist, and flower lover who has always wondered "what flower is that?"

The course will involve the identification, preservation, family recognition and ecology of Spring wildflowers and ferns in southern Quebec. There will be field trips to different ecological areas.

BEES AND BEEKEEPING

Prof. V. R. Vickery, Curator, Lyman Museum. Length of course 5 weeks, 10 lectures of 2 hours, Mondays and Wednesdays at 7 p.m., beginning April 18 through May 18, 1977. Biology Building, Room B204, Macdonald College. Fee $60. Class limited to 30.

This course is a **repeat** of the Fall Term.

EDIBLE WILD PLANTS

Elizabeth Parnis, Asst. Curator, McGill University Herbarium. 6 lectures of 3 hours, Wednesdays at 7 p.m., beginning May 11 through June 15, 1977. Biology Building, Room B212, Macdonald College. Fee $50. Class limited to 30.

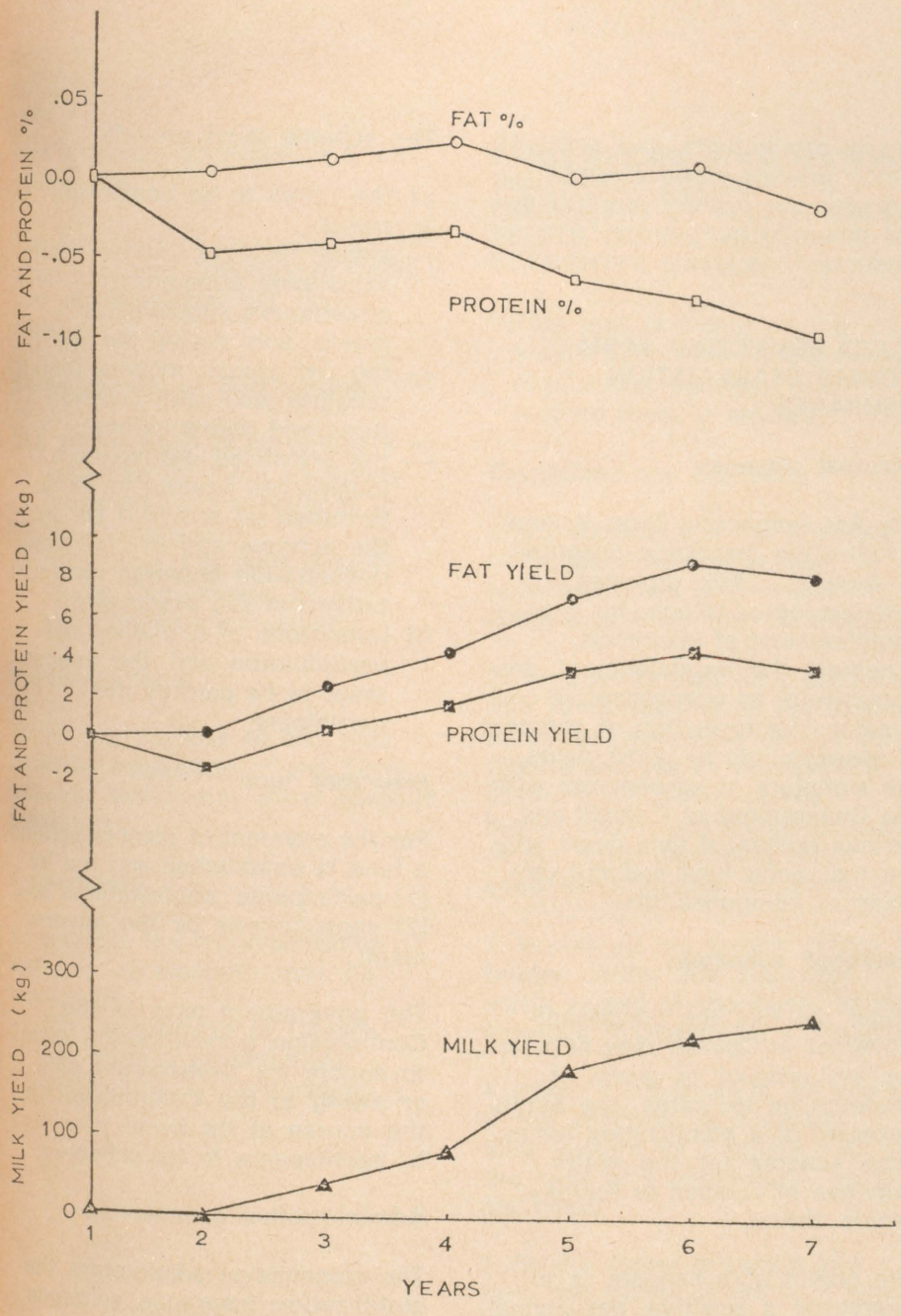
How to recognize, where to find, and how to use our local edible wild plants.

FUNDAMENTALS OF SMALL BOAT SAILING

Steve Olive. 8 sessions of 2 hours, Tuesdays at 8 p.m., beginning April 5 through May 24, 1977. Main Building, Macdonald College. Fee $50.

The course will include: basic principles of sailing, terminology, rigging, fundamental rules of the road, safety in a boat, and elementary knots and splices.

Fig. 1 Genetic trends among DHAS tested cows for milk, fat and protein yield and fat and protein percent.



(Continued from page 10)

Conclusions:

As mentioned previously, consumer demand now favours milk protein and non-fat solids, and reflects a decline in the relative importance of butter fat. In short, there has been an increase in the value of the protein and solids-not-fat content of milk relative to the butterfat content in recent years. Unfortunately, the present marketing structure has yet to adapt to this change, and our current breeding programs are still designed to emphasize fat content rather than protein. As a result, the genetic level of protein composition of our dairy cattle populations is declining.

Experience has shown that simply monitoring protein content and reporting it to the dairyman does not result in improved protein composition. Only the inclusion of protein or non-fat solids in the pricing mechanism can provide sufficient stimulus to the dairy breeder to exert the selection pressure required to stabilize or improve protein levels. This fact has been recognized in Holland and two of the largest dairy producing States in the U.S.A., Wisconsin and California, where multiple component pricing schemes have been instituted. In Canada, Ontario is also actively considering adoption of a multiple component pricing system. It is ironic that Quebec, the first North American region to include protein testing in its milk recording program, may be the last major dairy region to pay producers for milk composition which reflects consumer demand and the value of the product.

The Family Farm

Published in the interests of the farmers of the province by the Quebec Department of Agriculture.

FARM INCOME STABILIZATION INSURANCE

by J. B. Roy
Information Division

I. Introduction

The reason for farm income stabilization insurance is to be sought against the background of an agriculture where those who operate the farms are asking for a system that will guarantee them at least a certain minimum return for their products.

It was with this aim in view that, on June 27, 1975, the Quebec government passed an act establishing, on a voluntary and contributory basis, a system of stabilization insurance guaranteeing agricultural producers a net annual return through payment of compensation when their income from sales of a product are less than their production costs.

Of the four farm income stabilization schemes planned for the near future, the one to stabilize the income of producers of feeder calves, feeder cattle, and slaughter cattle will be the first to be introduced — starting August 1976. The amount of compensation under this scheme will be based on the gap between net production cost and receipts from the sale of beef animals and from the government's wintering grant.

The Act respecting Farm Income Stabilization Insurance fits in with a set of government measures already in effect to protect farmland, assist farm financing, improve land and buildings, increase productivity and self-sufficiency, provide crop insurance, and promote orderly marketing and diversify outlets for farm products.

II. ACT RESPECTING FARM INCOME STABILIZATION INSURANCE

Principal clauses:

The Act respecting farm income stabilization insurance assented to June 27, 1975, provides, amongst other things, for the establishment of insurance schemes, the establishment and operation of an administrative commission, the formation of payment of assessments by participants, the signature of agreements with the Government of Canada and various bodies; it also deals with the insurance fund and the payment of compensation.

Insurance schemes:

Under the Act, the Lieutenant-Governor in Council may stipulate, for any product or group of products he indicates, the establishment of a stabilization insurance scheme for the entire Province of Quebec or for any region therof.

The object of a scheme is to guarantee a positive net annual income to its participants and, for such purpose, compensation is paid to them by the Commission when their net annual income is lower than the stabilized net annual income.

The scheme must provide:

a) The items to be computed, namely:
— annual receipts (income from sales plus compensation, and government subsidies or grants, paid during the year);
— the net annual income (annual receipts less cash expenditures and depreciations);
— the stabilized net annual income (an amount to be determined as provided for in the scheme and set following consultation between representatives of the producers);
b) Conditions of eligibility and participation and the assessment to be paid by the participant.

Insurance fund

For the payment of compensations, a fund is established and fed by (1) participants' contributions and (2) contributions by the government.

The government pays to the Commission a contribution equal to double the assessment paid or owing to the Commission in the course of its fiscal year by participants in its schemes.

Administrative commission

The commission administers the stabilization insurance schemes and draws up the regulations.

It is made up of five members including a chairman and vice-chairman. Excepting the chairman, two members are chosen from among producers, and two from the civil service.

The chairman operates on a full-time basis.

The secretary is appointed by the Lieutenant-Governor in Council and chosen from the civil service.

Assessments of participants

The assessment of participants is:
— collected by their producers' board which transmits it to the Commission;
— otherwise it is paid directly to the Commission by the participants themselves.

Compensations

These are payable at the time fixed by regulation of the Commission ,which may allow advance payments.

Agreements

To promote the implementation of the Act, agreements may be made with :
— the Government of Canada
— any person, association, partnership or corporation.

FARM INCOME STABILIZATION INSURANCE SCHEME FOR PRODUCERS OF FEEDER CALVES, FEEDER CATTLE, AND SLAUGHTER CATTLE[1]

[1]This text is based on the stabilization insurance scheme regulations but may not replace them in any way.

Conditions and Eligibility

1. Be domiciled in the Province of Quebec and own at least 10 beef-type cows which have completed their first lactation.

2. Be a participant for a period of five years starting on the date of enrolment appearing on the certificate and pay an assessment covering all feeder calves, feeder cattle, and slaughter cattle in the herd, excluding those keep for breeding purposes.

3. Insure all his feeder calves, feeder cattle, and slaughter cattle raised continuously in the Province of Quebec by a producer.

4. Insure a maximum of 200 cows if the producer is a person, joint owners or a family and, in the case of a corporation, up to 400 cows.

5. Be the owner or tenant of a farm and owner of the herd which is to be insured.

If the producer is a body corporate, it must have a legal existence; at lease two thirds of its administrators and shareholders (in number and value) must devote at least 50 per cent of their time to work of a farming nature.

Definitions

Beef-type cow:

a recognized purebred beef-type female, or one resulting from a cross between two beef breeds or between a beef breed and a dairy breed.

Feeder calves:

a beef-type bovine intended for fattening, sold during the calender year in which it was born, and weighing at least 350 pounds on the hoof in the case of a female and 400 pounds in the case of a male.

Feeder steers:

a beef-type bovine intended for fattening sold after wintering, weighing on the hoof more than 600 pounds in the case of a female and over 700 pounds in the case of a male.

Slaughter cattle:

a bovine fattened for slaughter when it weighs more than 850 pounds, excluding breeding animals.

Application for Participation and Certification Conditions of Eligibility as of August 1, 1976

1. Forward by registered mail to the administrative Commission of the scheme, before August 1, 1976, the official registration form, the exigible assessment and the required information and documents.

2. The Commission may accept a producer who was eligible on August 1, 1976 but who did not forward his registration form before this date or who has not supplied the required documents or information, if the said producer:

   a) was for a major reason, unable to act within the prescribed delay, or
   b) pays the required assessment for the year of enrolment and the required assessmnt for the first year of the scheme for each cow in the herd, and participates in the scheme from the 1st of July following his membership application.

After July 31, 1976

An agricultural operator who does not meet the membership conditions of the scheme on July 31, 1976 may become a participant later if he:

1. forwards before July 1 of the year of application, the official registration form;
2. furnishes proof of his eligibility and complies with the Commission's requests for information;
3. pays the assessment owing for the year of adhesion;
4. participates in the plan for five years starting on the July 1st following his application for enrolment.

Certification

If a producer meets the eligibility requirements and satisfies the conditions for membership, the Commission issues him a certificate bearing the date of his admission to participation in the scheme.

Release from obligation to participate for five years

The Commission may release a participant from his obligation to participate in the scheme for a period of five years if the participant:

1. is unable to keep his cows;
2. pays the assessments owing for the term of the contract;
3. transfers his ownership rights in his cows to another producer who maintains the insurance according to the prescribed terms and conditions;
4. transmits to the Commission, before the sale, the information required by it concerning the transaction.

Purchase of insured cows

1. **Purchase of fewer than 10 insured cows**

   Whoever buys less than 10 insured cows must:
   a) notify the Commission thereof within 60 days of the purchase;
   b) maintain the insurance in force on the purchased cows until the expiration of the term, but without the right to renew it unless he notified the Commission of his intention to insure his other cows, at the time of his purchase notification.

2. **Purchase of 10 or more insured cows**

   Whoever buys at least 10 insured cows must:

   a) notify the Commission thereof within 60 days of the purchase;
   b) maintain the insurance in force on the purchased cows until the expiration of the term. Right to renew thererafter is automtically conferred on him if there has been no notice of termination of his participation;
   c) insure his other cows, within 60 days of the purchase, in conformity with the eligibility conditions required of those joining the scheme after July 31, 1976.

Reduction of the herd

An insured producer who reduced his herd to fewer than 10 cows forfeits his right to compensation, but he nevertheless has to pay the assessment set for the year during which the reduction occurred. If such reduction results from circumstances beyond his control ("force majeure") the producer has six months to restore his herd to at least 10 cows.

Variation in the number of cows

If, in the course of a year, the number of cows in a herd varies, the number insured shall be deemed to be the number of cows kept during the last wintering period.

Termination of participation

A participant may terminate his participation in this scheme after five years on condition that he give by registered mail, at least three months before the end of the said five years, prior written notice thereof to the Commission.

Failing such notice, the participant will be insured for another five years, also renewable on the same terms.

OPERATION

Marketing

To obtain the compensation provided for under the scheme, the participant must market his insured animals as follows:

1. **Feeder calves and feeder steers**
a) through a licensed specialized or public auction, or
b) a feedlot, an agricultural enterprise or a marketing body registered with the Commission, and
c) obtain and transmit to the Commission a weigh slip for each animal sold.

2. **Slaughter cattle**

a) through an abattoir holding an operating permit from the Department of Agriculture, and
b) forward to the Commission a slaughter certificate and comply with other formalities required by the Commission.

Compensation

The object of the stabilization insurance scheme is to guarantee a positive net annual income to the participant only as regards insured cow-calf production; for this purpose, compensation is paid to him by the Commision when his **net** annual income is less than the **stabilized net** annual income. However, this compensation does not take into account the net annual incomes of individual participants but is based on figures for a "standard" farm on which the producer is assumed to work full time.

Calculation procedures

The **net** annual income is established by subtracting real cash expenses (variable costs plus overhead) and depreciation from the receipts of the enterprise for the year.

The **stabilized net** annual income is an amount equal to 90 per cent of the annual income of a skilled worker ("ouvrier spécialisé").

The sales prices used in calculating annual receipts are as follows:

a) **for feeder calves and feeder steers**

— the weighted mean of the prices fetched at specialized auctions;

b) **for slaughter cattle**

— the weighted means of the prices in abattoirs holding an operating permit from the Department of Agriculture. This weighted mean price is calculated taking into account the percentagewise distribution of beef into grades A, B, and C throughout Canada.

Entitlement to compensation

— The right of a participant to compensation is determined by the Commission on the basis of its knowledge of his legal status on the preceding 1st of July, if no change has since been communicated to it by the participant.

— A participant seeking compensation has 30 days from the date on which he sold his animals to forward to the Commission the attestations, certificates, proofs of sales, and other documents he is required to submit to it.

— Only one compensation per animal can be paid, regardless of whether it be sold as feeder calf, feeder steer, or slaughter cattle.

— No compensation relating to a sale prior to the date of his joining the scheme will be paid to a producer.

Limit to the number of animals insured

Feeder calves, feeder steers, and slaughter cattle born in the herd and marketed are insured up to 0.75 of a unit per cow per year of the scheme.

To find the insurable limit for a given year, it is necessary to multiply the annual limit of 0.75 of a unit per cow by the number

of years of participation by the producer in the scheme and subtract from this total the number of feeder calves, feeder steers, and slaughter cattle already sold.

The number of units insured in one year of participation may not exceed 1.5 per cow.

Assessment

The assessment is the annual premiums which a producer must pay under the scheme for feeder calves, feeder steers, and slaughter cattle marketed during the year.

This assessment is established for each of the above-mentioned three categories for each of the five years of participation, according to the year in which the participant joins the scheme, in order to spread out the amount of compensation to be paid.

For the period of participation in the 1976-1980 scheme, the assessment rates are as follows:

ASSESSMENT RATES Per cow owned by the producer:	1976
A) — feeder calves	$11 per cow (basic assessment)
— feeder calves weighing more or less than 406 lb. on the hoof	$0.0361 per pound more or less than 406[1]
B) — feeder steers	$11 per cow (basic assessment)
— feeder steers weighing more or less than 730 lb. on the hoof	$0.0201 per pound more or less than 730[1]
C) — slaughter cattle	$15 per cow (basic assessment)
— slaughter cattle weighing more or less than 1,000 on the hoof	$0.0201 per pound more or less than 1,000

[1] to be added to or subtracted from the basic assessment according to the weight of the insured animal.

Contribution

"Contribution" means the government's contribution to the Commission's insurance fund. For the purposes of this scheme it is equal to twice the assessment paid to the Comission during its fiscal year by all participants.

This Month with the QWI

May '76 Convention Highlights

This year we in the QWI celebrated our 65th. Anniversary. The birthday cake was cut by the President, Miss Smith, while the members sang "Happy Birthday" at dinner on the 27th.

Rain was with us when we arrived, but as usual the WI brought good weather and the last two days were sunny and warm.

We are grateful to Vice-Principal Blackwood and the Faculty and staff of Macdonald College for the kind hospitality we always receive. The campus was beautiful with so many lovely shades of green and the glorious colours

Above: President Miss Edna Smith serving birthday cake to members. Below: Board members enjoy tea at Mrs. Blackwood's home on the Lakeshore Road.

of the tulips, lilacs, and crab-apples in bloom.

Dr. Blackwood, in his welcome to the WI, said many changes were taking place on the campus, which is shared with John Abbott CEGEP. A new building will be going up and others renovated. We will have to move to a new office, but he did not think it would be until next year. Some of the ladies were able to visit the Centennial Building and see the plans of the new building. A grant had been received from Mr. Stewart, an heir of Sir William Macdonald, but the support of the students, staff, government, and friends was needed. (WI were considered among the friends). He also said that 1977 would be the 70th Anniversary of the Agricultural Faculty.

We are grateful, too, to Mrs. Blackwood for inviting us to her home on the Lakeshore, where she and the faculty wives en - tertained us to tea and where we not only admired Mrs. Blackwood's many varied and lovely handicrafts but also enjoyed interesting conversation as well.

In her President's address, Miss Smith spoke on QWI and what it had accomplished. She said it was difficult to explain what we do when asked but reports show we do a lot and are doing very well.

An edited version of Dr. Gordon MacEachern's speech on Thursday morning will be published in a future issue.

Another interesting speaker at the Convention was Mr. Marc Côté of the CBM Midday Magazine program. He outlined how large the CBC was and how effective, reaching 98.8 per cent of Canadians via radio and TV with programs in English and French as well as Indian and Eskimo in the north. Programs reach not only Canadians, but also, through short wave, are broadcast to 11 countries overseas and to the Armed Forces. He gave us some pointers to keep in mind if we write radio drama.

This was welcome information as the ACWW cultural contest for 1977 is a four-minute radio script on ACWW. Mr. Côté pointed out that in an interview or dialogue we had to think for two and that a talk was the easiest way to present information. He advised us to use the five Ws (who, what, where, why, and when) as a basis for researching and presenting our drama and to explain it in everyday language, using a stop-watch to time the speed. A lively question and answer period followed on the CBC and programming in general.

There were no entries in the Drama contest this year, and it has been decided to cancel the contest for next year. A source of other suitable entertainment will be looked into. We would like to thank Miss Clarke and Miss Hilda Graham for an impromptu evening of films, singing, and other entertainment in the place of the expected plays. Miss Graham was our Entertainment Convener and thanks to her, with able assistance from Miss Viola Moranville at the piano and Mrs. Henderson, we enjoyed some fun in the midst of our busy work schedule.

Our ex-secretary, Mrs. Champion, was presented with a wedding gift from all the branches. Mrs. Walter Kilgour, who presented it, spoke for us all when she wished Mrs. Champion much happiness in the future and an enjoyable retirement.

We were happy to meet our new secretary, Mrs. James Gamble. Betty Gamble will be in the office three days a week. Anyone wanting to get in touch with her by phone should do so on Mondays. Mrs. Lord assisted as recording secretary and also helped Mrs. Parker to register everyone as they arrived and to answer all the questions (cheerfully) that came up.

Handicrafts were a disappointment this year. The articles on display were of fine quality, but there were not many of them. We were very happy to have Miss Auger with us again as a judge. She is looking very well and enjoying her retirement. We welcome Mrs. Steve Murphy, who is teaching at the College and who will be our judge next year. In Miss Auger's words, "I leave you in good hands." We hope for a good exhibition next year.

The gifts for the sale table at the PEI Convention were on display and were really beautiful. They ranged from maple products to crocheted and knitted articles, pottery, and embroidery. Thank you to all who contributed. We were asked for 100 and 144 gifts came in. Thank you also to those who sent in recipe post cards. Approximately 600 have been received. These will make nice souvenirs from Quebec.

The Tweedsmuir Drama contest for 1976, a one-act play re Folklore had been won, on the Provincial level, by Mrs. D. Woolley of Hemmingford Branch in Chateauguay-Huntingdon County. Second prize went to Mrs. Gordon French of Sawyerville, Compton County. Third prize went to Mrs. Edgar Nugent of Kinnear's Mills Branch, Megantic County. Our congratulations go to these winners. The first two have gone on to be judged at the Federal Level.

Only one quilt had been received for the Tweedsmuir handicraft contest and it was from the Hemmingford Branch in Chateauguay-Huntingdon County. It also has gone on for the Federal level judging.

A beautiful gavel block, suitably inscribed, was presented by Sherbrooke County to the QWI by Mrs. Don Cullen, their President, in memory of Mrs. Westover. Miss Smith expressed all our feelings when she thanked the County members for their most thoughtful gift.

We would like to say thank you to Mr. Steve Olive, Manager of the Dining Room, for the wonderful job he and his staff did in organizing everything so well. It is such a treat not to have to think about the preparation of meals, the cooking, and washing up afterwards!

Above: Secretary Mrs. James Gamble, President Miss Edna Smith, and 1st. Vice President Mrs. Wells Coates listen intently to guest speaker Marc Côté of CBM's Midday Magazine. Below: Before going in for tea, members enjoy both the view and the first taste of sunshine in days.

Mrs. S. Murphy, of the School of Food Science and the new coordinator of judging, in conversation with Miss S. Auger, who has been judging the handicrafts at Convention for many years.

It was Steve's last week as Manager and we will miss him next year though we are glad to hear he will still be around the campus. Thank you also goes to Mrs. Orr and her staff for making us so comfortable; to the West Island WI for their delicious refreshments in the evenings after our meetings — how welcome the tea was!; to Mrs. G. McGibbon from Argenteuil County, our ex-President, who presided over the election of new officers; (congratulations to Argenteuil County-31 members answered the Roll Call); and to the Coats Co. for their support with the handicraft contest. We enjoyed meeting their representatives, Mr. Uher and Mr. Anderson, who came to present the prizes to the winners in the embroidery contest.

The youngest member at the Convention was Miss Kathy Paquet from Grand Cascapedia in Bonaventure County. Kathy is 21 and has been a member for four years. She is already seasoned in WI work as she has served three years as Branch Secretary and since March has been the Convener of Education. This was her first convention, and she enjoyed being with us and meeting members from other parts of Quebec. We hope you will come again, Kathy.

These are a few highlights of the meeting. A full report will reach you all later.

Mrs. Edgar Nugent is the new Convener of Publicity. She is, at present, living in Leeds Village, Megantic County, but after September expects to move to Howick in Chateauguay-Huntingdon where she grew up and still has family who live there. She will let you know her new address later. In the meantime send your news every month to her at Leeds Village.

I do want to thank all the Conveners who sent me news during my term. It has been a wonderful experience getting to know you all, your WIs and the area you live in, and though I will miss the volume of mail and hearing of all your doings and meetings I won't be completely out of touch.

The QWI Executive honoured me by inviting me to represent Quebec as a Vice-President on the Federal Board. This is a three-year appointment, and there will be a Vice-President to represent each Province instead of Federal Conveners. I am looking forward to going to the FWIC Convention in PEI and will be able to let you know more of what is expected of me after the Convention.

Mrs. James Robertson
QWI Publicity

EXPO QUEBEC HANDICRAFT CONTEST

Expo Quebec is a handicraft competition that is open to all women's groups in Quebec. The articles are first judged on a local level and then one of each entry is sent in to the contest from the County level. This year the exhibition is in Quebec City from August 26 to September 6. Articles for judging have to be in Quebec by August 9, 1976. Articles are sent to:

Mr. Rosaire Harvey
Division Exposition
Ministry of Agriculture
1100 Vincent Massey St.
Quebec City, P.Q.

Each article has to have a special label attached and all articles sent have to be entered (in TRIPLICATE) on forms.

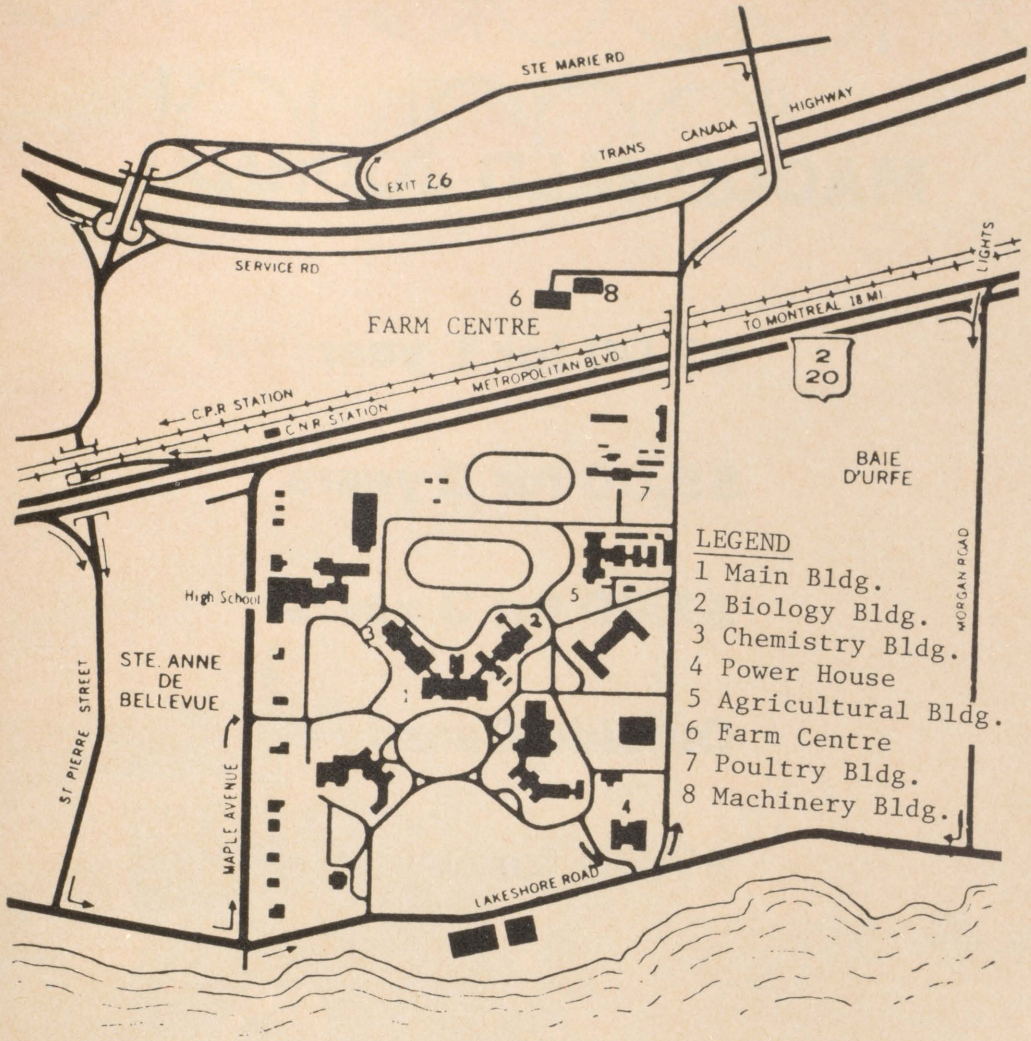
One form goes in the parcel, one is sent to:

Miss Luce Tremblay
Information Service
Ministry of Agriculture
1140 Taillon
Quebec City, P.Q.

One form is kept by the County Secretary. A list of the articles and names of exhibitors is sent to the office at Macdonald College.

Labels will be sent to each County, but if none has been received by the end of June, they may be obtained by writing to Miss Tremblay.

MACDONALD COLLEGE



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